



## RESEARCH ARTICLE

### ROLE OF COLPOSCOPY IN MANAGEMENT OF CERVICAL EROSION IN RURAL POPULATION OF EASTERN BIHAR

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#### ABSTRACT

The present study was undertaken to evaluate the role of colposcopy as a screening and diagnostic tool in women presenting with cervical erosion, to co-relate colposcopic findings with histopathology of cervical biopsy and to find out the outcome of different treatment modalities for cervical erosion.

**Methods:** All the women included in the study were subjected to colposcopic examination. Colposcopic guided biopsy was taken in cases with abnormal colposcopic findings and the results were compared.

**Results:** Fifty women in reproductive age diagnosed with cervical erosion were subjected to colposcopy and colposcopy guided biopsy, If any abnormal findings were seen. On colposcopy 68% revealed normal findings and 30% revealed abnormalities like acetowhite areas, abnormal vascular patterns, mosaic and punctuations and iodine negative areas.

When the colposcopic findings were subjected to Coppersons Grading -3 cases were in grade I, 8 cases in grade II and 4 cases in grade III. Histopathology of these 15 cases revealed CIN I and chronic cervicitis, cervical metaplasia with atypia in grade I, CIN II and chronic cervicitis in grade II and CIN III and invasive cancer in grade III colposcopic abnormalities. Among 50 cases of cervical erosions. 8 cases has CIN and 1 had invasive cancer.

##### Mode of treatment:

1. Premalignant- Cryotherapy or Hysterectomy
2. Invasive – Radical Hysterectomy

**Conclusion:** Colposcopy and histopathology are complementary in diagnosis and management of cervical erosions.

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## INTRODUCTION

Cervical cancer continues to be a leading cause of mortality among women in our country. Cervical erosion is one of the commonest cervical lesion in women in our OPD. Therefore the present study was undertaken to evaluate the role of colposcopy in management of cervical erosions. Cervical erosion is a lesion of varied significance. Apart from postpartum and post abortal states it is frequently associated with lower genital tract infections.

## MATERIALS AND METHODS

The present study was in gynecological OPD of MGM Medical College and LSK Hospital, Kishanganj Bihar in women diagnosed with cervical erosion. 50 women after proper counselling and taking informed consent were enrolled. Duration of study was from 01.02.15 to 01.10.15.

### Inclusion criteria

1. Diagnosed case of cervical erosion on clinical examination.
2. Sexually active parous women ready for follow ups.

### Exclusion criteria

1. Pregnant puperal post abortal post-menopausal women
2. Bleeding PV at the time of examination

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3. Invasive carcinoma of the cervix and other genital malignancies.

### Procedure

In clinically diagnosed and selected cases of cervical erosion Pap smear was taken. In clinically uninfected cases colposcopy and guided biopsy done. Clinically infected cases were given one course of antimicrobial therapy and then colposcopy and guided biopsy was taken. Colposcopy was performed according to the conventional method. Then 3-5% acetic acid was applied to see the acetowhite areas. Schillers test Using 50% Lugols iodine was also done. Biopsy was taken from areas with highest abnormality. Broad spectrum antibiotics (doxycycline+ metronidazole+ fluconazole) was prescribed after colposcopy guided biopsy. Depending upon the histopathological report women were subjected to cryotherapy or hysterectomy. Relevant data collected and statistical analysis done.

discharge per vaginum and lower abdominal pain. Other were pruritus vulvae, dyspareunia, intermenstrual bleeding etc. Pap smear in 69% cases showed inflammatory smear coinciding with 68%cases having various cervicovaginal infection. Colposcopy was done in all cases. Severity of epithelial abnormality in colposcopy finding co-related very well (in 95%) with HPE finding.

### Copplesons grading system of colposcopy findings

Grade-I - Insignificant –not suspicious Minimal neoplastic potential, Acetowhite epithelium, usually shiny, Borders are not necessarily sharp with or without fine caliber vessels. Absence of atypical vessels. The above findings may suggest normal to CIN I lesions. HPV infection

Grade-II Suspicious lesion having neoplastic potential stromal invasion is not imminent Acetowhite areas of greater opacity sharp borders Dilated regular shaped

**Table 1. Distribution of cases according to presenting symptoms**

Presenting symptoms	Number of cases	Percentage
Per Vaginal discharge	35	70%
Pain in abdomen	10	20%
Per vaginal spotting	2	4%
Intermenstrual bleeding	1	2%
Dyspareunia	1	2%
Pruritus vulvae	1	2%

**Table 2. Distribution of cases on basis of Colposcopy findings**

Coppleson's and Coworker's Grading system	Number of cases (n= 50)	Percentage
Normal	34	68%
Grade I (Insignificant, not suspicious)	3	6%
Grade II (significant, suspicious)	8	16%
Grade III (Highly significant, Highly suspicious)	4	8%
Unsatisfactory	1	2%
Total	50	100%

**Table 3. Correlation of Colposcopy and Cervical Biopsy findings**

Colposcopy finding & no. of cases	Cervical Biopsy: Histopathology Report and no. of cases
Normal(34 Cases)	Not done
Unsatisfactory (1 case )	Not done
Grade I(3 cases)	CIN 1 (2 CASES) Chronic nonspecific cervicitis (1 case)
Grade ii (8 cases)	CIN 1 (4 CASES) Chronic nonspecific cervicitis (1 case) Squamous metaplasia with atypia (1case) CIN
Grade iii (4 cases)	CIN 3 (2CASES) 2) Squamous cell carcinoma (1 case) 3)CIN 2 (1Case)

**Table 4. Treatment as per histopathology report**

Histopathology report	Number of cases (n=15)	Percentage	Modality of treatment
CIN 1	6	42.85%	Cryocautery and Hysterectomy
CIN 2	2	14.28%	Cryocautery and Hysterectomy
CIN 3	2	14.28%	Total Abdominal Hysterectomy
Squamous metaplasia with atypia	1	7.14%	Total Abdominal Hysterectomy
Squamous cell carcinoma	1	7.14%	Wertheim's Hysterectomy
Chronic non-specific cervicitis	2	14.28%	Broad spectrum antimicrobials

## RESULTS

Women in this study group were in reproductive age (25-35yrs) parous (Parity 2-4) sterilized (underwent family planning) literate (up to matriculation) and belonging to low socio-economic group.14.28% of women with cervical erosion were diagnose with chronic nonspecific cervicitis. In those cases three follow up was done and during follow up if erosion was persistent then repeat colposcopy and Pap smear was done. Most common presenting symptom was whitish

vessels with defined pattern Absence of atypical vessels increased intercapillary distance. Lesion correspond from CIN-II to CIN-III

Grade-III Highly significant and highly suspicious. Lesion of high neoplastic potential invasion is imminent. Very white or grey white epithelium with sharp borders. Dilated irregularly shaped vessels Occasional atypical vessels Increased inter capillary distance irregular contour Lesion correspond to CIN-III and early invasive carcinoma.

## DISCUSSION

Colposcopy, a clinical method of proven accuracy, is an excellent method of evaluating clinically unhealthy cervix. The population of present study varied in age and parity. In 50 cases of cervical erosions there was normal finding in 34 cases whereas 15 had abnormal colposcopic finding and one of them had unsatisfactory colposcopy. Abnormal colposcopic findings were noted and graded accordingly. Commonest colposcopic finding was acetowhite areas. Zivadinovic *et al.* in their study got mosaic pattern as most common colposcopic finding in 44% of cases. (Zivadinovic *et al.*, 2009) Bahalero *et al.* in their study reported acetowhite area as commonest colposcopic finding in 42.5% cases and acetowhite area with abnormal vascularity in 24.55 cases. (Bhalerao *et al.*, 2012) Boicea *et al.* reported in their study of 500 cases 51% normal colposcopic findings and 49% with abnormal colposcopic findings. Corelationship between abnormal colposcopy and histopathology was in range of 85-90%. (Boicea *et al.*, 2012) Brotzman *et al.* in their study of 564 cases observed that the colposcopic finding correlated with diagnosis in 64.35 cases. (Brotzman and Schellhase, 2004) Stafli A, Mattingly RF recommended a minimal proficiency level of 80% for colposcopy. (Stafli and Mattingly, 1973) Olaniyan *et al.* conducted a meta-analysis to quantify the validity of colposcopy in the diagnosis of early cervical neoplasia. He reported colposcopic accuracy of 89% which matched exactly with histoscopy in 61% cases. (Olaniyan) Jyothi *et al.* in their study of 200 high risk patients reported abnormal colposcopy in 65% cases. (Jyoti *et al.*, 2013) The prevalence of pre malignant lesion in unhealthy cervix ranges from 8.15% to 35.2%. (Nieminem *et al.*, 2004; Seekin *et al.*, 1997; Mallur *et al.*, 2009) In our study, 15 cases who had abnormal colposcopy findings were subjected to colposcopy guided biopsy. Histopathology showed CIN 1 in 6, CIN 2 in 2, CIN 3 in 2, Chronic nonspecific cervicitis in 2, Squamous metaplasia in 1 and Squamous cell carcinoma in 1 case. On comparing Grade 1 colposcopy matched with Histopathological finding of CIN 1 and chronic nonspecific cervicitis, Grade 2 matched with CIN 2, Chronic nonspecific cervicitis and squamous metaplasia with atypia, Grade 3 matched with CIN 2, 3 and Squamous cell carcinoma of cervix. There was 96% correlation between colposcopy and histology.

All patient with CIN1 and CIN 2 were counselled regarding treatment and follow up. They were given the option of cryotherapy but knowing the post procedure profuse vaginal discharge many of them who had completed the family opted for total abdominal hysterectomy. CIN3 cases were treated with total abdominal hysterectomy as they were non-compliant with local ablative therapy. Wertheim's Hysterectomy was done for squamous cell carcinoma. Chronic nonspecific cervicitis cases were given broad spectrum antimicrobials both local and systemic. All cases with abnormal colposcopy were treated as mentioned above and follow up done at 1, 2 and 6 month after treatment. The patient with radical hysterectomy was advised for long term follow up. All the patient were doing well and were happy. The earlier diagnosis of CIN and of invasive cervical cancer is the desirable goal of colposcopy of unhealthy cervix so that a conservative line of management can be chosen.

## Conclusion

Colposcopy was found to be useful in understanding the morphology of cervical lesions, both of the neoplastic and the non-neoplastic ones and this way very helpful in planning their management. On per speculum examination of unhealthy cervix cervical erosion is a common finding. It may be either benign (due to infections) or premalignant (forerunner of malignancy) A detailed colposcopic evaluation of cervix with a guided biopsy is an important diagnostic method for detection of premalignant lesion and early malignancy of cervix. There is high accuracy and good co-relation between colposcopy and histology. Colposcopy has the risk of over diagnosis so finding must be verified with guided biopsy and histopathology.

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